```
=> d his

     (FILE 'HOME' ENTERED AT 15:42:24 ON 18 SEP 2002)

     INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
     BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO,
CABA,
     CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB,
     DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 15:42:38 ON
     18 SEP 2002
               SEA FUCOSYLTRANSFERASE
               ---------
                4   FILE ADISALERTS
                1   FILE ADISNEWS
               48   FILE AGRICOLA
               13   FILE ANABSTR
                4   FILE AQUASCI
                3   FILE BIOBUSINESS
                5   FILE BIOCOMMERCE
             1210   FILE BIOSIS
              114   FILE BIOTECHABS
              114   FILE BIOTECHDS
              610   FILE BIOTECHNO
               97   FILE CABA
              459   FILE CANCERLIT
             1323   FILE CAPLUS
               15   FILE CEABA-VTB
                2   FILE CEN
               49   FILE CONFSCI
               12   FILE DDFB
               18   FILE DDFU
              424   FILE DGENE
               12   FILE DRUGB
               22   FILE DRUGU
               15   FILE EMBAL
              961   FILE EMBASE
              515   FILE ESBIOBASE
               18   FILE FEDRIP
                2   FILE FROSTI
                7   FILE FSTA
              873   FILE GENBANK
               66   FILE IFIPAT
              165   FILE JICST-EPLUS
              274   FILE LIFESCI
             1103   FILE MEDLINE
                1   FILE NIOSHTIC
                2   FILE NTIS
              319   FILE PASCAL
                1   FILE PHIN
                5   FILE PROMT
              978   FILE SCISEARCH
              242   FILE TOXCENTER
              256   FILE USPATFULL
                1   FILE USPAT2
               63   FILE WPIDS
               63   FILE WPINDEX
L1              QUE FUCOSYLTRANSFERASE
               ---------
```

FILE 'CAPLUS, BIO[redacted], EMBASE, BIOTECHNO, MEDLINE, [redacted]SEARCH' ENTERED AT 15:44:01 ON 18 SE[redacted]2002

L2 33 S L1 AND (VITRO GLYCOSYLATION) OR (VITRO FUCOSYLATION)

L3 6 DUP REM L2 (27 DUPLICATES REMOVED)

=> d l3 ibib ab 1-6

L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 1999:294276 CAPLUS
DOCUMENT NUMBER: 131:100358
TITLE: The Effect of O-Fucosylation on the First EGF-like Domain from Human Blood Coagulation Factor VII
AUTHOR(S): Kao, Yung-Hsiang; Lee, Geoffrey F.; Wang, Yang; Starovasnik, Melissa A.; Kelley, Robert F.; Spellman, Michael W.; Lerner, Laura
CORPORATE SOURCE: Departments of Analytical Chemistry Protein Engineering, Pharmacokinetics and Metabolism Genentech Inc., South San Francisco, CA, 94080, USA
SOURCE: Biochemistry (1999), 38(22), 7097-7110
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The first epidermal growth factor-like domain (EGF-1) from blood coagulation factor VII (FVII) contains two unusual O-linked glycosylation sites at Ser-52 and Ser-60. We report here a detailed study of the effect of O-fucosylation at Ser-60 on the structure of FVII EGF-1, its Ca2+-binding affinity, and its interaction with tissue factor (TF). The in **vitro fucosylation** of the nonglycosylated FVII EGF-1 was achieved by using O-fucosyltransferase purified from Chinese hamster ovary cells. Distance and dihedral constraints derived from NMR data were used to det. the soln. structures of both nonglycosylated and fucosylated FVII EGF-1 in the presence of CaCl2. The overall structure of fucosylated FVII EGF-1 is very similar to the nonfucosylated form even for the residues near the fucosylation site. The Ca2+ dissocn. consts. (Kd) for the nonfucosylated and fucosylated FVII EGF-1 were found to be 16.4 .+-. 1.8 and 8.6 .+-. 1.4 mM, resp. The FVII EGF-1 domain binds to the extracellular part of TF with a low affinity (Kd .apprxeq. 0.6 mM), and the addn. of fucose appears to have no effect on this affinity. These results indicate that the FVII EGF-1 alone cannot form a tight complex with TF and suggest that the high binding affinity of FVIIa for TF requires cooperative interaction among the four domains in FVII with TF. Although the fucose has no significant effect on the interaction between TF and the individual FVII EGF-1 domain, it may affect the interaction of full-length FVIIa with TF by influencing its Ca2+-binding affinity.
REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
ACCESSION NUMBER: 1999:581084 CAPLUS
DOCUMENT NUMBER: 131:320873
TITLE: The formation of the oncofetal J28 glycotope involves core-2 .beta.6-N-acetylglucosaminyltransferase and .alpha.3/4-fucosyltransferase activities
AUTHOR(S): Panicot, Laurence; Mas, Eric; Pasqualini, Eric; Zerfaoui, Mourad; Lombardo, Dominique; Sadoulet, Marie-Odile; El Battari, Assou

CORPORATE SOURCE: INSERM U 260, Unite de Recherche de Physiopathologie des Regulations Hormono-Nutrit[illegible]neles, Faculte de Medecine-Timone, Marseille, 13[illegible]5, Fr.
SOURCE: Glycobiology (1999), 9(9), 935-946
CODEN: GLYCE3; ISSN: 0959-6658
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The feto-acinar pancreatic protein or FAPP, the oncofetal glycoisoform of bile salt-dependent lipase (BSDL), is characterized by the presence of the J28 glycotope recognized by mAbJ28. This fucosylated epitope is carried out by the O-linked glycans of the C-terminal mucin-like region of BSDL. This glycotope is expressed by human tumoral pancreatic tissues and by human pancreatic tumoral cell lines such as SOJ-6 and BxPC-3 cells. However, it is not expressed by the normal human pancreatic tissues and by MiaPaCa-2 and Panc-1 cells. Due to the presence of many putative sites for O-glycosylation on FAPP and BSDL, the structure of the J28 glycotope cannot be attained by classical phys. methods. In the first part of the present study, we have detd. which glycosyltransferases were differently expressed in pancreatic tumoral cell lines compared to normal tissues, focusing in part on fucosyltransferases (Fuc-T) and core-2 .beta.6-N-acetylglucosaminyltransferase (Core2GlcNAc-T). The data suggested that .alpha.2-Fuc-T activity was decreased in the 4 cell lines tested (SOJ-6, BxPC-3, MiaPaCa-2, and Panc-1). The .alpha.(1-3) and .alpha.(1-4) fucosylations were decreased in tumor cells that do not express the J28 glycotope, whereas .alpha.4-Fuc-T and Core2GlcNAc-T activities were significantly increased in SOJ-6 cells which best expressed the J28 glycotope. Therefore, we wished to gain information about glycosyltransferases involved in the building of this structure by transfecting the cDNA encoding the mucin-like region of BSDL in CHO-K1 also expressing Core2GlcNAc-T and/or FUT3 and/or FUT7 activities. These CHO-K1 cells have been previously transfected with the cDNA encoding Core2GlcNAc-T and/or FUT3 and/or FUT7. Data indicated that the C-terminal peptide of BSDL (Cter) produced by those cells did not carry out the J28 glycotope unless Core2GlcNAc-T activity is present. Further transfection with FUT3 cDNA increased the antibody recognition. Nevertheless, transfection with FUT3 or FUT7 alone did not generate the formation of the J28 glycotope on the C-terminal peptide. Furthermore, the Cter peptide produced by CHO-K1 cells expressing Core2GlcNAc-T was more reactive to the mAbJ28 after in **vitro fucosylation** with the recombinant sol. form of FUT3. These data suggested that the J28 glycotope encompasses structures initiated by Core2GlcNAc-T and further fucosylated by .alpha.3/4-Fuc-T such as FUT3, likely on GlcNAc residues.

REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3
ACCESSION NUMBER: 1996:367198 CAPLUS
DOCUMENT NUMBER: 125:55468
TITLE: A missense mutation in the FUT6 gene results in total absence of .alpha.3-fucosylation of human .alpha.1-acid glycoprotein
AUTHOR(S): Brinkman-Van der Linden, Els C. M.; Mollicone, Rosella; Oriol, Rafael; Larson, Goeran; Van den Eijnden, Dirk H.; Van Dijk, Willem
CORPORATE SOURCE: Dep. Med. Chem., Fac. Med., Vrije Univ., Amsterdam, 1081 BT, Neth.
SOURCE: Journal of Biological Chemistry (1996), 271(24), 14492-14495

CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The major .alpha.3-fucosyltransferase activity in human plasma is encoded by the gene for fucosyltransferase VI (FUT6). A missense mutation (Gly-739 .fwdarw. Ala) in this gene is responsible for deficiency of enzyme activity in plasma. To exam. whether this fucosyltransferase is the sole enzyme responsible for the .alpha.3-fucosylation of serum glycoproteins in the liver, we studied the fucosylation of three glycoproteins in sera of individuals with or without inactivated FUT3 and/or FUT6 gene(s) but with a functional FUT5 gene. .alpha.1-Acid glycoprotein was used as the principal reporter protein for liver .alpha.3-fucosyltransferase activity, because of its high fucose content. In all individuals with the FUT6 missense mutation Gly-739 .fwdarw. Ala in double dose, no fucosylation of .alpha.1-acid glycoprotein was found. This .alpha.1-acid glycoprotein was not intrinsically resistant to fucosylation, since it was susceptible to in **vitro fucosylation** using an .alpha.3/4-fucosyltransferase isolated from human milk. The same result was found for .alpha.1-antichymotrypsin and .alpha.1-protease inhibitor. On the other hand in all individuals with .alpha.3-fucosyltransferase activity in plasma, .alpha.3-fucosylated glycoforms of the glycoproteins studied were found. The degree of fucosylation of .alpha.1-acid glycoprotein was correlated with .alpha.3-fucosyltransferase activity. These data indicate that the product of FUT6, but not of FUT3 or of FUT5, is responsible for the .alpha.3-fucosylation of glycoproteins produced in liver and suggest that this organ is a major source of .alpha.3-fucosyltransferase activity in plasma.

L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 4
ACCESSION NUMBER: 1997:45578 CAPLUS
DOCUMENT NUMBER: 126:128554
TITLE: Identification of a GDP-L-fucose:polypeptide **fucosyltransferase** and enzymic addition of O-liked fucose to EGF domains
AUTHOR(S): Wang, Yang; Lee, Geoffrey F.; Kelley, Robert F.; Spellman, Michael W.
CORPORATE SOURCE: Dep. Pharmacokinetics Metabol. Protein Eng., Genetech Inc., South San Francisco, CA, 94080, USA
SOURCE: Glycobiology (1996), 6(8), 837-842
CODEN: GLYCE3; ISSN: 0959-6658
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An assay for GDP-fucose:polypeptide **fucosyltransferase** has been established. The enzyme catalyzes the reaction that attaches fucose through an O-glycosidic linkage to a conserved serine or threonine residue in EGF domains. The assay uses recombinant human factor VII EGF-1 domain as acceptor substrate and GDP-fucose as donor substrate. Synthetic peptides with sequences taken from five proteins previously shown to contain O-linked fucose (Harris and Spellman, 1993; Glycobiol. 3, 219-224) did not serve as efficient acceptor substrates. These synthetic peptides did not comprise complete EGF domains and did not contain all six cysteine residues that define the EGF structure. Therefore, the enzyme appears to require more than just a consensus primary sequence and likely requires that the EGF domain disulfide bonds be properly formed. The enzymic reaction showed linear dependency of its activity on time, amt. of enzyme, and substrates. Although the enzyme did not exhibit an abs. requirement for Mn2+, enzymic activity did increase ten fold in the presence of 50 mM

MnCl2. The in **vitro glycosylation** reaction resulted in complete conversion of the acceptor substrate to glycosylated product, and characterization of the purified product by electrospray mass spectrometry revealed that one fucose was added onto the polypeptide. Most of the enzymic activity was found to be in the sol. fraction of CHO cell homogenates. However, when enzyme was prepd. from rat liver in the presence of protease inhibitors, 37% of the activity was recovered by Triton X-100 extn. of the membrane particles after extensive aq. washes. The result suggests that the enzyme is probably a membrane protein and, by analogy with other glycosyl-transferase, probably has a 'stem' region that is very susceptible to proteolysis.

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 5
ACCESSION NUMBER: 1993:98970 CAPLUS
DOCUMENT NUMBER: 118:98970
TITLE: Glycosylation of rat sperm plasma membrane during epididymal maturation
AUTHOR(S): Ram, Daulat; Tulsiani, P.; Skudlarek, Marjorie D.; Holland, Michael K.; Orgebin-Crist, Marie Claire
CORPORATE SOURCE: Sch. Med., Vanderbilt Univ., Nashville, TN, 37232-2633, USA
SOURCE: Biol. Reprod. (1993), 48(2), 417-28
CODEN: BIREBV; ISSN: 0006-3363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors quantified 4 glycosyltransferase activities of spermatozoa and fluid from various regions of the epididymis. Only 10-20% of the total glycosyltransferase activities (sialyltransferase, fucosyltransferase, galactosyltransferase, and N-acetyl glucosaminyltransferase) sedimented with the spermatozoa; the remaining 80-90% of were present in sol. form in the epididymal fluid. When the 4 transferase activities were expressed per 106 spermatozoa, only sialyltransferase and fucosyltransferase activities showed maturation-dependent changes. The former enzyme was higher on the proximal caput spermatozoa and the latter on the distal caput spermatozoa. When spermatozoa from the proximal and distal caput, corpus, and proximal and distal cauda were incubated with fucose-labeled nucleotide sugar (GDP[14C]fucose), higher levels of radioactivity were routinely incorporated into the spermatozoa from the distal caput. The [14C]fucose-labeled spermatozoa or sperm plasma membranes, when solubilized, resolved in SDS-PAGE, and visualized by autoradiog., showed that the radioactivity had been incorporated into an endogenous acceptor of 86 kDa (major component) and several minor components. Treatment of the solubilized spermatozoa with N-glycanase suggested that the [14C]fucose is mainly present on N-linked oligosaccharide units. Thus, some of the sperm surface components are fucosylated during sperm maturation. The potential significance of the in **vitro fucosylation** of sperm surface components in the prodn. of functionally mature spermatozoa is discussed.

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 6
ACCESSION NUMBER: 1987:100089 CAPLUS
DOCUMENT NUMBER: 106:100089
TITLE: Increased fucosylation of chick brain proteins following training: effects of cycloheximide
AUTHOR(S): McCabe, Norah; Rose, Steven P. R.
CORPORATE SOURCE: Brain Res. Group, Open Univ., Milton Keynes, MK7 6AA, UK
SOURCE: J. Neurochem. (1987), 48(2), 538-42
CODEN: JONRA9; ISSN: 0022-3042
DOCUMENT TYPE: Journal
LANGUAGE: English
AB When chicks were trained to avoid pecking a bead coated with

methylanthranilate in a 1-trial passive avoidance task there was an increase in fucos[redacted]ncorporation in vivo and in vi[redacted] in the right forebrain base of [redacted]ethylanthranilate (M)-trained c[redacted]pared to water (W)-trained chicks. The relation of this increase to de novo protein synthesis in vivo and in vitro was examd. Cycloheximide (Cx), 1 mM, inhibited in **vitro fucosylation** of chick brain slices by 60% after 3 h. However, the training-related increase in in-**vitro fucosylation** still persisted. When Cx was injected intraventricularly 10 min before training, the subsequent increase in the **vitro fucosylation** due to training was still apparent. When Cx was injected and [14C]leucine and [3H]fucose incorporation studied in vivo in M-trained and W-trained chicks, there was no increase in fucosylation due to training in the Cx-treated M-trained over the W-trained chicks. Thus, in-**vitro fucosylation** and its increase subsequent to training is not protein synthesis-dependent, but both in vivo and in vitro there are interactions between Cx and fucosylation steps that are independent of Cx's effects on protein synthesis.

WEST

Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases

Search Results -

Terms	Documents
L1 same (Large scale)	13

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L4

Refine Search

Recall Text | Clear

Search History

DATE: Wednesday, September 18, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L4	L1 same (Large scale)	13	L4
L3	L1 and (Large scale)	86	L3
L2	L1 and (FucT-IV or FucT-VI or FucT-VII)	10	L2
L1	fucosyltransferase	379	L1

END OF SEARCH HISTORY